

Work Order ID 142587

142587

Page 1

Monday, March 21, 2016 2:07:23 PM

Item ID: D2947 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Clamp
 Start Date: 3/18/2016 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 3/24/2016 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan:  Date: Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2947	Rev A1								

105 0.00 ***105*** 30 MAR 23 2016 **DAS 13 9-89**
 Purchasing Memo 0.00
 Purchasing ISSUE PO 31797
 CUT PER DRWG D2947 REV.A1

115 0.00 ***115*** 30x Sp/6-04-7.
 Packaging Memo 0.00
 Packaging

130 0.00 ***130*** 30 **DAS 38 9-89**
 Brake NC Bend as per dwg 0.01
 Brake NC Small Fab
 Memo APR 11 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Page 2

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							
150									
QC	Memo	0.01							
Quality Control									
160	Identify as per dwg & Stock Location: Sts4	0.00							
160									
Packaging	Memo	0.01							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.05							
Quality Control									

w/o costed

30

MAY 13 2016

see w/o 145025 mf 16-4-29

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐ _____									

Monday, March 21, 2016 2:07:23 PM

Page 3

Setup Start *NS1*

Stop *NS2*

Customer:

Run Start *NR1*

Stop *NR2*

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Quality Control

Memo

. 0.00

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		OTHER : ☐							

Picklist Print

Monday, March 21, 2016 2:07:22 PM

Work Order ID: 142587

142587

Parent Item: D2947

D2947

Parent Item Name: Clamp

Start Date: 3/18/2016

Required Date: 3/24/2016

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP: A00.01.14New issueEC
IPP Rev:B No longer made in house 07-06-11 JLM IPP REV:C
11.08.08. MADE IN HOUSE DD VERF :EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2947P		Purchased	No				Each	0.0000		30			
D2947P									**				
Clamp													
M304S16GA		Purchased	No			100	sf	115.4090	0.062	1.957895		APR 01 2016	DAS 13 9-89
M304S16GA									**				
304/316 Sheet .063													

Location	Loc Qty	Loc Code
MAT019	115.409	
m134067	3.906	
m134158	47.503	
m134399	64	

M134604

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

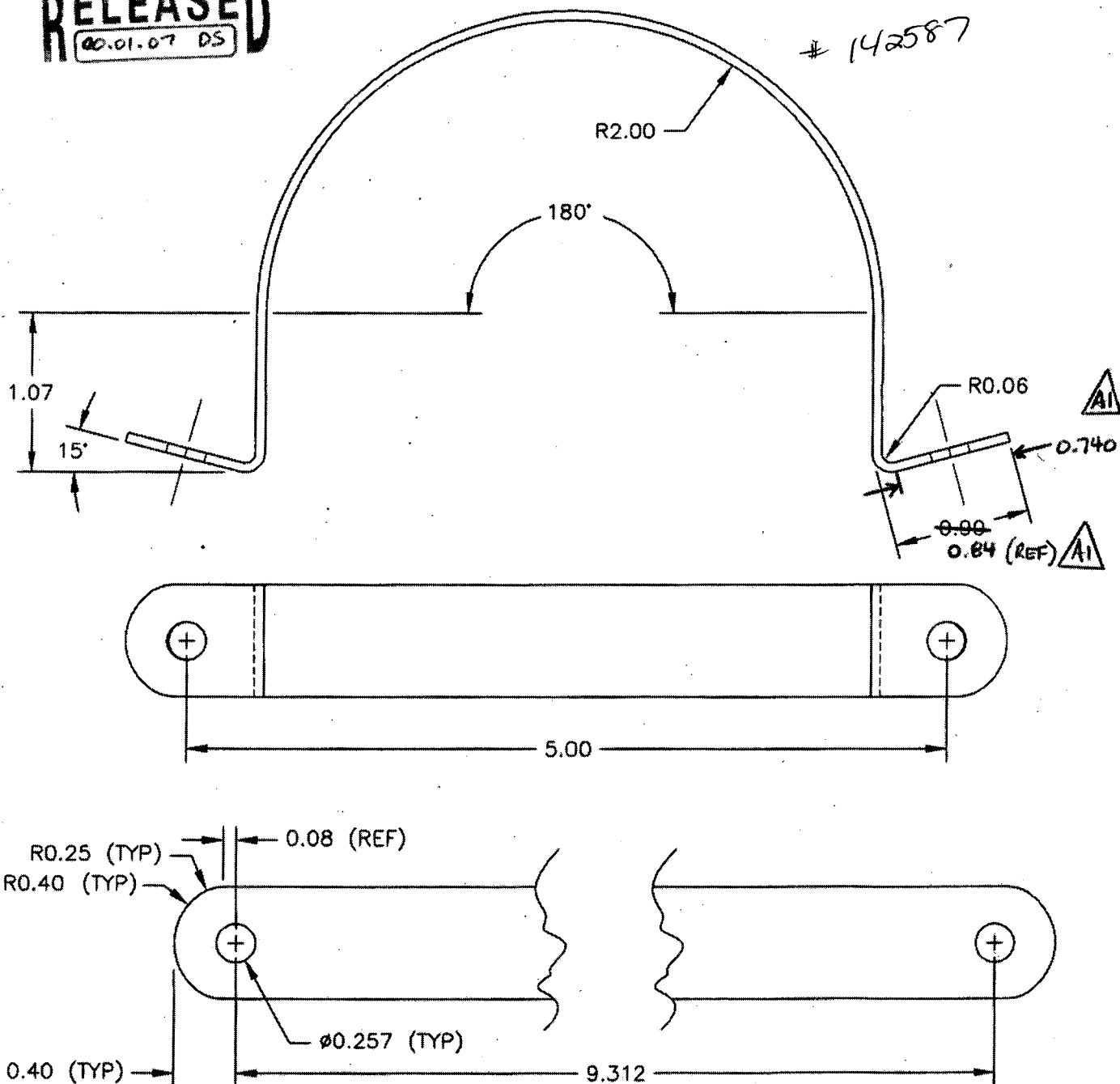
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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OTHER : ☐					



DESIGN 1	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 1	APPROVED 1	DRAWING NO. D2947	REV. A SHEET 1 OF 1
DATE 00.01.06		TITLE CLAMP	SCALE 1:1
A	00.01.06	NEW ISSUE	

RELEASED
00.01.07 DS

142587



D2947 FLAT PATTERN

MATERIAL: AISI 304/316 SS 0.063 THICK x 0.75 WIDE
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
ALL DIMENSIONS ARE IN INCHES

AI 01.09.07 AND 0.740 DIMENSION; 0.84 LATS 0.90

DQA: _____ Date: _____



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Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
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Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process								
Misidentified ☐	☐ Past Due	OTHER : _____							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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T.P.I. INDUSTRIES INC.

148 GOODFELLOW
DELSON, QUÉBEC J5B 1V4
CANADA
Tel: (450) 633-0484
Fax: (450) 633-0879

Packing Slip

Packing Slip No.: 7442
Date: 2016-04-05
Page: 1

Sold to: Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada	Ship to: Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada
Order No.: 31797	Sold By: JONATHAN LESSARD
Shipped By:	Ship Date: 2016-04-05
Tracking No.:	

Item No	Unit	Description	Quantity
d2947	Chaque	d2947 clamp	30x 90
d3537-1	Chaque	d3537-1 wearpad	40
d3564-11	Chaque	d3564-11 wearplate	10
d3564-5	Chaque	d3564-5 wearplate	6
d4095-041	Chaque	d4095-041 wearplate assy	8
d4095-045	Chaque	d4095-045 wearplate assy	8
d4095-047	Chaque	d4095-047 wearplate assy	4
Sp 16-04-17.			
Comment: Net / 30 from date of invoice 2% svc. chg. on invoices over 30 days			



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31797**

Purchase Order Date 3/23/2016

PO Print Date 3/23/2016

Page Number 2 of 7

Order From :

VC-TPI001

TPI INDUSTRIES INC.
148 RUE GOODFELLOW
DELSON, QUEBEC J5B 1V4
CANADA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 450-633-0484

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

3	D2947P ✓	Clamp	4/20/2016 FN	90.00 ✓	\$4.75	\$427.50
			Yes	Each		
			4/20/2016			

CUT AS PER DWG D2947 REV. A
B142690 X 60
B142587 X 30
MATERIAL 304 SHEET 16GA

SP/6-04-07

Line Total: \$427.50

4	D3537-1P ✓	Wearpad	4/20/2016	40.00	\$5.25	\$210.00
			Yes	Each		
			4/20/2016			

CUT AS PER DWG D3537 REV. E
B142912
MATERIAL 304 SHEET 16GA

Line Total: \$210.00

5	D3564-11P ✓	Wearplate Aft	4/20/2016 FN	10.00	\$24.00	\$240.00
			Yes	Each		
			4/20/2016			

CUT AS PER DWG D3564 REV. D
B142836
MATERIAL 304 SHEET 16GA

Note:

3/23/2016

STAINLESS STEEL SHEET 304L-2B DUAL GRADE
.0600 Nom X 48.0000" X 96.0000"
PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

21Mar16
Pg 1/1

Signed by



North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

740 Imperial Road North

Certificate: 120157 1 Mail To:
Customer: 007206 001 THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Ship To:
 THYSSENKRUPP MATERIALS
 2821 LANGSTAFF ROAD
 CONCORD, ON L4K5C6

Date: 12/03/2015 Page: 1

Steel: 304/304L

Finish: 2B

Your Order: PEC271093

NAS Order: WN 0072789 03

Corrosion: ASTM A262/14:18 Obend-OK

PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED. UNS 30400/30403
ASTM A240/15a, A480/14b, A666/15; ASME SA240/13, SA480/13, SA666/13
CHEM ONLY ON FOLLOWING ASTM: A276/13, A479/13a, A484/13a, A312/13
CHEM ONLY ON FOLLOWING ASME: SA312/13, SA479/13
AMS 5511H/5513J XMRR; MIL-5059D AMD3(X CRN MEAS); MIL-4043B
NACE MR0175/ISO 15156-3:2009 A, MR0103/07; QQ8766D-A X MAG PERM
MIN. SOLUTION ANNEAL TEMP 1900F. WATER QUENCHED

REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.
EN 10204:2004 3.1; RoHS 1 & 2 Compliant
Material is Free of Radioactive Contamination
Steel Making Process: EAF, AOD, & Cont. Casting
Product Mfg.by a Quality Mgt.Sys. in Conf. w/ISO 9001
*Melted & Manufactured in the USA; Mat'l is DFARS Compliant

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323
(South Africa) JP(Japan) Chemical Analysis per ASTM A751/08

CHEMICAL ANALYSTS

CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

Chemical Analysis per ASTM A751/08

MECHANICAL PROPERTIES

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

AGBrow

DQA: _____ Date: _____



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QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☒</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☒																																															
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Date : <u>16-04-04</u>		Step #: <u>105</u>		QTY Effective : _____		MRB (QS1042) Approval DAS 9 9-89 <u>16-04-04</u>																																																																	
Description Work Order Deviation Part was outsource to T.P.I. on P0317764. At inspection some holes where found under size. Ref. to NCR 16-5694				Disposition • Re work (drill) holes to drawing. • Fill out F.A.I. sheet		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																																	
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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☒ Engineering ☐ Quality ☐ Other ☐									
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